

REMARKS

In response to the Office Action mailed July 13, 2006, Applicants respectfully request reconsideration. To further the prosecution of this application, each of the issues raised in the Office Action is addressed herein.

Claims 1, 3, 5-22, 24-35, 37 and 39-99 are pending in this application, of which claims 1, 20, 35, 51, 57, 64, 71, 78, 86, 87, 90, 91, and 92 are independent claims.

By this amendment, claims 1, 20, 21, 35, 51, 57, 58, 64, 65, 71, 78, 86, 87, 90 and 91 have been amended. Claims 58 and 65 have been amended solely to correct minor typographical errors, and not to overcome any rejections based on prior art. Dependent claims 94-99 have been added. No new matter has been added, and the amendments do not raise any new issues. In addition, claims 4, 23 and 38 have been cancelled herein without prejudice or disclaimer.

The application as now presented is believed to be in allowable condition.

I. Telephone Interview with Examiner Flanders

Applicants' representatives, Joseph Teja, Jr. and Melissa A. Beede, thank Examiner Flanders for his courtesy in granting and conducting a telephone interview held on September 8, 2006. During the interview, Applicants' representatives discussed with the Examiner proposed amendments to independent claims 1, 20, 35, 51, 57, 64, 71, 78, 86 and 87, and the rejections of claims 90, 91, and 92. The substance of the interview is discussed herein.

II. Claim Rejections Under 35 U.S.C. §112, Second Paragraph

On page 2 of the Office Action, claim 21 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claim 21 has been amended to address the objection. Accordingly, withdrawal of this rejection is respectfully requested.

III. Claim Rejections under 35 U.S.C. §103(a) – Kiltz in view of Eastty and Suzuki

On page 3 of the Office Action, claims 1, 3, 5-7, 9-17, 20-22, 24, 25, 27-32, 35, 37, 39, 40, 42-48, 51, 53, 54, 92 and 93 (including independent claims 1, 20, 35, 51, and 92) were rejected under 35 U.S.C. §103(a) as allegedly being obvious over Kiltz (U.S. Patent No. 5,191,319) in view of Eastty (U.S. Patent No. 6,021,204) and further in view of Suzuki (U.S. Patent No. 6,362,411). Applicants respectfully traverse these rejections.

Notwithstanding Applicants' traversal, independent claims 1, 20, 35 and 51 have been amended in the manner proposed during the September 8th interview solely to advance the prosecution of the application. Applicants do not accede to the appropriateness of the rejection of these claims, but wish to expedite allowance at this time. Support for the amendments may be found e.g., at page 12, lines 2-9, page 35, lines 29-31, and page 39 lines 12-23 of the application as filed.

a. Independent Claim 1

Claim 1 has been amended in the manner proposed during the September 8th interview. During the interview, the Examiner agreed that the claim as amended appears to distinguish over the cited references. As requested by the Examiner, a summary of the discussion is provided below.

Claim 1, as amended, includes subject matter drawn from dependent claim 4 (now canceled), which was rejected as allegedly being obvious over the references cited in connection with claim 1, and further in view of Drago (U.S. Patent No. 5,461,188). Accordingly, Applicants' representatives discussed with the Examiner the Drago reference in connection with the amendment to claim 1.

As discussed during the interview, Drago does not disclose or suggest digitally processing an audio input to determine a beat of the audio input, as now recited in claim 1. Although Drago discloses illuminating lights in a synchronized fashion with the rhythmic beat of music (e.g., Abstract of Drago), Drago achieves this objective by executing a light program and a sound program in synchrony (col. 2, lines 51-61). The programs are stored in parallel and share common memory locations (col. 2, lines 62-63; Fig. 11). In Drago, digital processing of the audio program

to determine a beat of the program is not performed and, indeed, is not required to illuminate the lights in synchrony with the beat of the music.

In addition, as discussed during the interview, Drago does not disclose or suggest “a method for executing a lighting program... wherein the lighting program includes at least one variable parameter that affects a perceivable aspect of a lighting effect generated by the plurality of LEDs in response to the control signals, and wherein the act (D) includes an act of modifying the at least one variable parameter during the execution of the lighting program in the act (C) to generate at least one of the control signals based at least in part on the determined beat of the audio input.” Specifically, Drago does not disclose or suggest modifying a variable parameter of a lighting program *during execution of the lighting program* based on a beat of an audio input.

In view of the foregoing, the cited references fail to disclose or suggest all of the features of claim 1. Accordingly, claim 1 patentably distinguishes over the cited references and is in condition for allowance. Therefore, the rejection of the claim should be withdrawn.

Claims 3 and 5-19 depend from claim 1 and are allowable based at least upon their dependency.

b. Independent Claim 20

Applicants’ claim 20 is directed to a computer readable medium encoded with a program that, when executed, performs the method of claim 1. Accordingly, for reasons similar to those discussed above in connection with claim 1, claim 20 patentably distinguishes over the cited references and is in condition for allowance. Therefore, the rejection of this claim should be withdrawn.

Claims 21-22, 24-34 and 93 depend from claim 20 and are allowable based at least upon their dependency.

c. Independent Claim 35

The cited references do not disclose or suggest each of the limitations of claim 35. In particular, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest “an audio decoder to digitally process the audio input to determine at least one

characteristic of the audio input... wherein the audio decoder determines a beat of the audio input, and wherein the at least one characteristic of the audio input relates to the beat.”

Further, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest “wherein the lighting program includes at least one variable parameter that affects a perceivable aspect of a lighting effect generated by the plurality of LEDs in response to the control signals, and wherein the at least one controller modifies the at least one variable parameter during the execution of the lighting program to generate at least one of the control signals based at least in part on the determined beat of the audio input.”

In view of the foregoing, claim 35 patentably distinguishes over the cited references and is in condition for allowance. Therefore, the rejection of this claim should be withdrawn.

Claims 37 and 39-50 depend from claim 35 and are allowable at least based on their dependency.

d. Independent Claim 51

The cited references do not disclose or suggest each of the limitations of claim 51. In particular, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest “a computer readable medium encoded with a first program that, when executed on a processor, performs a method for executing a lighting program to control a plurality of light emitting diodes (LEDs), wherein the processor is programmed with a second program that processes an audio input to determine at least one characteristic of the audio input, wherein the at least one characteristic includes a beat of the audio input, the method comprising... (C) during execution of the lighting program in the act (B), generating at least one of the control signals based at least in part on the at least one characteristic of the audio input received from the second program, wherein the at least one characteristic of the audio input relates to the beat.”

Further, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest “wherein the lighting program includes at least one variable parameter that affects a perceivable aspect of a lighting effect generated by the plurality of LEDs in response to the control signals, and wherein the act (C) includes an act of modifying the at least one

variable parameter during the execution of the lighting program in the act (B) to generate at least one of the control signals based at least in part on the determined beat of the audio input.”

In view of the foregoing, claim 51 patentably distinguishes over the cited references and is in condition for allowance. Therefore, the rejection of this claim should be withdrawn.

Claims 52-56 depend from claim 51 and are allowable based at least upon their dependency.

e. Independent Claim 92

Applicants’ claim 92 is directed to a method for executing a lighting program to control a plurality of light emitting diodes (LEDs) to create a light show. The method comprises acts of: (A) receiving an audio input having a duration and varying in time during the duration of the audio input, wherein the audio input is in a digital music file format; (*B*) *digitally processing the audio input to determine at least one first characteristic of the audio input at a first time during the duration*; (C) executing the lighting program in synchronization with the audio input to generate control signals to control the plurality of LEDs; and (*D*) *during execution of the lighting program in the act (C) at a time that is prior to the first time during the duration of the audio input, generating at least one of the control signals based at least in part on the at least one first characteristic of the audio input so that the light show anticipates changes in the audio input*.

During the interview, Applicants’ representatives explained that the claim relates to the subject matter described in the application at page 42, lines 12-28, which discusses how the analysis of an audio input signal may be performed prior to playing the audio signal to generate an audible sound. As described in the application, analyzing the audio input signal prior to playing the audio signal allows the mapping function to look ahead in the audio signal to anticipate changes that will occur, and thereby institute lighting effects in advance of a change in the audible playback of the audio signal.

As discussed during the September 8th interview, the combination of Kiltz, Eastty and Suzuki does not teach or suggest “at a time that is prior to the first time during the duration of the audio input, generating at least one of the control signals based at least in part on the at least one first characteristic of the audio input so that the light show anticipates changes in the audio input,” as recited in claim 92. In particular, the combination does not teach or suggest that control signals

based at least in part on the at least one first characteristic (of the audio input) are generated prior to *the first time* (that is, the time at which the at least one first characteristic of the audio input occurs).

During the interview, the Examiner agreed that the claim as presently pending appears to distinguish over the cited references. In view of the foregoing, the rejection of claim 92 should be withdrawn.

IV. Claim Rejections under 35 U.S.C. §103 over the Combination of Kiltz, Eastty, Suzuki and Drago

On page 23 of the Office Action, claims 4, 18, 19, 23, 33, 34, 38, 49-50, 55, 57-60, 62-67, 69-74, 76-82, 84-89, and 91 (including independent claims 57, 64, 71, 78, and 91) were rejected as allegedly being obvious over Kiltz, Eastty, Suzuki and further in view of Drago. Applicants respectfully traverse these rejections.

Notwithstanding Applicants' traversal, independent claims 57, 64, 71, 78 have been amended in the manner proposed during the September 8th interview. Claim 91 has also been amended in a similar manner. Again, Applicants do not accede to the appropriateness of the rejection of these claims, and have amended the claims solely to advance the prosecution of the application.

a. Independent Claim 57

The cited references do not disclose or suggest each of the limitations of claim 57. In particular, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest "(A) receiving an audio input and an input from at least one timer, wherein the audio input is in a digital music file format; (B) analyzing the audio input to determine at least one characteristic of the audio input... wherein the act (B) includes an act of determining a beat of the audio input, and wherein the at least one characteristic of the audio input relates to the beat."

Further, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest "wherein the lighting program includes at least one variable parameter that affects a perceivable aspect of a lighting effect generated by the plurality of LEDs in

response to the control signals, and wherein the act (D) includes an act of modifying the at least one variable parameter during the execution of the lighting program in the act (C) to generate at least one of the control signals based at least in part on the determined beat of the audio input.”

In view of the foregoing, claim 57 patentably distinguishes over the cited references and is in condition for allowance. Therefore, the rejection of this claim should be withdrawn.

Claims 58-63 depend from claim 57 and are allowable at least based on their dependency.

b. Independent Claim 64

Applicants’ claim 64 is directed to a computer readable medium encoded with a program that, when executed, performs the method of claim 57. Accordingly, for reasons similar to those discussed above in connection with claim 57, claim 64 patentably distinguishes over the cited references and is in condition for allowance. Therefore, the rejection of this claim should be withdrawn.

Claims 65-70 depend from claim 64 and are allowable at least based on their dependency.

c. Independent Claim 71

The cited references do not disclose or suggest each of the limitations of claim 71. In particular, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest “a computer readable medium encoded with a first program that, when executed on a processor, performs a method for executing a lighting program to control a plurality of light emitting diodes (LEDs), wherein the processor is programmed with a second program that processes an audio input to determine at least one characteristic of the audio input, wherein the at least one characteristic includes a beat of the audio input, the method comprising... (C) during execution of the lighting program in the act (B), generating at least one of the control signals based at least in part on the at least one characteristic of the audio input and the input from the at least one timer, wherein the at least one characteristic of the audio input relates to the beat.”

Further, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest “wherein the lighting program includes at least one variable parameter that affects a perceivable aspect of a lighting effect generated by the plurality of LEDs in

response to the control signals, and wherein the act (C) includes an act of modifying the at least one variable parameter during the execution of the lighting program in the act (B) to generate at least one of the control signals based at least in part on the determined beat of the audio input.”

In view of the foregoing, claim 71 patentably distinguishes over the cited references and is in condition for allowance. Therefore, the rejection of this claim should be withdrawn.

Claims 72-77 depend from claim 71 and are allowable based at least upon their dependency.

d. Independent Claim 78

The cited references do not disclose or suggest each of the limitations of claim 78. In particular, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest “an audio decoder to process the audio input to determine at least one characteristic of the audio input... wherein the audio decoder determines a beat of the audio input, and wherein the at least one characteristic of the audio input relates to the beat.”

Further, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest “wherein the lighting program includes at least one variable parameter that affects a perceivable aspect of a lighting effect generated by the plurality of LEDs in response to the control signals, and wherein the at least one controller modifies the at least one variable parameter during the execution of the lighting program to generate at least one of the control signals based at least in part on the determined beat of the audio input.”

In view of the foregoing, claim 78 patentably distinguishes over the cited references and is in condition for allowance. Therefore, the rejection of this claim should be withdrawn.

Claims 79-85 depend from claim 78 and are allowable based at least upon their dependency.

e. Independent Claim 91

The cited references do not disclose or suggest each of the limitations of claim 91. In particular, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest “(A) receiving an audio input and an input from at least one timer, wherein the audio input is in a digital music file format; (B) analyzing the audio input to determine at least

one characteristic of the audio input... wherein the act (B) includes an act of determining a beat of the audio input, and wherein the at least one characteristic of the audio input relates to the beat."

Further, for reasons similar to those discussed in connection with claim 1, the cited references do not disclose or suggest "wherein the lighting program includes at least one variable parameter that affects a perceivable aspect of a lighting effect generated by the plurality of LEDs in response to the control signals, and wherein the act (E) includes an act of modifying the at least one variable parameter during the execution of the lighting program in the act (D) to generate at least one of the control signals based at least in part on the determined beat of the audio input."

In view of the foregoing, claim 91 patentably distinguishes over the cited references and is in condition for allowance. Therefore, the rejection of this claim should be withdrawn.

V. Claim Rejections under 35 U.S.C. §103(a) in view of Drago

On page 39 of the Office Action, claim 90 was rejected under 35 U.S.C. §103(a) as allegedly being obvious over Drago. Applicants respectfully traverse this rejection.

Applicants' claim 90 is directed to a method for authoring a lighting program to control a plurality of light emitting diodes (LEDs) in response to at least one characteristic of an audio input. The method comprising acts of *(A) providing a graphical user interface (GUI) that displays a plurality of icons representative of the plurality of LEDs, wherein the plurality of icons are configured to be selected and arranged on a layout space of the GUI in response to user inputs provided via the GUI, information representative of a plurality of lighting effects to be assigned thereto, and information representative of the at least one characteristic of the audio input, wherein the audio input is in a digital music file format;* (B) selecting, based on at least one user input provided via the GUI, at least one of the plurality of lighting effects to correspond to at least one of the plurality of LEDs in response to the at least one characteristic of the audio input; and (C) creating a lighting program, based on the at least one user input, for generating control information for the plurality of LEDs.

Claim 90 has been amended along the lines discussed during the telephone interview held on September 8th. The Examiner indicated during the interview that amending claim 90 in this manner

would appear to distinguish over Drago. Support for the amendments may be found e.g., at page 13, lines 24-32 of the application as filed.

In particular, claim 90 now recites providing a graphical user interface (GUI) that displays a plurality of *icons* representative of the plurality of LEDs, *wherein the plurality of icons are configured to be selected and arranged on a layout space of the GUI in response to user inputs provided via the GUI*. Providing such a GUI would not be obvious in view of Drago.

The Office Action concedes that Drago does not disclose providing a graphical user interface (GUI). However, the Office Action states that Drago teaches a user interface that allows a user to select, edit, or add additional programs (citing col. 8, lines 20-25), and alleges that it would be obvious to modify Drago to include a GUI to provide feedback to the user during the various processes. However, even if Drago were modified to include a GUI to allow a user to select, edit, or add additional programs, the GUI would not display a plurality of icons representative of a plurality of LEDs, and such icons would not be configured to be selected and arranged on a layout space of the GUI, as recited in claim 90.

For at least these reasons, claim 90 patentably distinguishes over Drago, and is in condition for allowance. Therefore the rejection of this claim should be withdrawn.

VI. Newly Added Claims

Dependent claims 94-99 have been added herein, and are believed to be allowable at least based on their dependency from an allowable independent claim.

Claims 94-96, which respectively depend from independent claims 1, 20 and 35, recite subject matter deleted from their respective base claims via this amendment.

Claims 97-99, which also respectively depend from independent claims 1, 20 and 35, have been added to further define Applicants' contribution to the art. These claims are supported in the application as filed, e.g., at page 32, line 28 – page 33, line 2.

VII. General Comments on Dependent Claims

Since each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicants believe that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, Applicants do not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor do Applicants concur that the basis for the rejection of any of the dependent claims is proper. Therefore, Applicants reserve the right to specifically address the patentability of the dependent claims in the future, if deemed necessary.

Conclusion

It is respectfully believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment set forth in the Office Action does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Furthermore, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify any concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' representative at the telephone number indicated below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,

Dated: September 28, 2006

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